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ABSTRACT

The course is one of a group which provides 11th grade students with the general information, technical knowledge, basic skills, attitudes, and values required for job entry level in printing. The course is 90 hours in length. Course content includes goals, specific objectives, orientation, safety in the stripping department, and a stripping survey. Also studied are basic mathematics, basic drafting and layout practice, the stripping department, job planning, layouts and impositions, stripping procedure, inspection and proofreading, and care of flats after stripping. A bibliography and posttest are appended. (NH)

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AUTHORIZED COURSE OF INSTRUCTION FOR THE QUINMESTER PROGRAM

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Course Outline
PRINTING 2 - 9755
(Lithographic Stripping)
Department 48 - Quin 9755.03

DADE COUNTY PUBLIC SCHOOLS

DIVISION OF INSTRUCTION • 1973

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D A D E C O U N T Y P U B L I C S C H O O L S

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M I A M I, F L O R I D A 33132

Course Outline

PRINTING 2 - 9755
(Lithographic Stripping)

Department 48 - Quin 9755.03

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VOCATIONAL AND ADULT EDUCATION

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Dade County Public Schools
Miami, Florida 33132

September, 1973

Published by the School Board of Dade County

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Course Description

9755	48	9755.03	Lithographic Stripping
State Category Number	County Dept. Number	County Course Number	Course Title

This quinmester is designed as one of a group of quinmester courses offered in the field of Printing. The student will receive the general information, technical knowledge, basic skills, attitudes and values that are required for the job entry level.

Indicators of Success: Prior to entry into this course, the vocational student will display mastery of the skills indicated in Process Camera (9755.02).

Clock Hours: 90

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PREFACE

The following quinmester in the printing industry is a guide to help students become employable in the skills, knowledge, attitudes and values necessary for performing the required services of the stripper.

The reproduction of copy by the lithographic process consists of a series of operations beginning with photography and ending with the printed product. Each of the operations in this series is important in that it limits the quality of the product in the steps that follow. Stripping is especially important in the control of the quality of lithographic printing because much of the accuracy of the reproduction is determined by the care exercised at this stage.

The course, which is 90 hours in length is designed as one of the foundation courses for the 11th grade student. This outline consists of 12 blocks of instruction which are subdivided into several units each.

The teaching methods used by the instructor vary, depending upon the individual abilities of the students. These include lecture, visual aids or actual instruction on equipment or machines.

This outline was developed through the cooperative efforts of the instructional and supervisory personnel, the Quinmester Advisory Committee, and the Vocational Curriculum Materials Service, and has been approved by the Dade County Vocational Curriculum Committee.

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with Suggested Hourly Breakdown

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Methods of Evaluation	1
Student Responsibilities	1
Student Benefits	1
II. SAFETY IN STRIPPING DEPARTMENT (4 Hours)	
General Precautions	1
Safety in Equipment	1
Safety in Tools	2
Material and Supplies	2
III. SURVEY (6 Hours)	
Need for Stripping	2
Stripping for Lithography	2
Stripping and Photo-Composing	2
IV. BASIC MATHEMATICS (10 Hours)	
Numbers and Fractions	2
Proportions	2
Area Measurements	2
Angles	2
Units of Measurement	2
V. BASIC DRAFTING AND LAYOUT PRACTICE (10 Hours)	
Measurements	2
Marking Locations on the Layout	3
Ruling Lines	3
Scribing Lines	3
Dividing Lines and Angles	3
Ruling Parallel Lines	3
Ruling at Right Angles	3
Ruling Intermediate Angles	3
Ruling Curved Lines	3
Location of Film Sections	3
Fitting Irregular Forms	3
Proportioning from Copy	3
VI. STRIPPING DEPARTMENT (10 Hours)	
Equipment for Stripping	4
Tools for Stripping	4

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Materials for Stripping 4
Supplies for Stripping 4

VII. JOB PLANNING (10 Hours)
Preparations for Stripping 4
Planning the Layout 4
Organizing the Job 5

VIII. LAYOUTS AND IMPOSITIONS (4 Hours)
Classes of Layouts 5
Signature Imposition 5

IX. STRIPPING PROCEDURE (24 Hours)
Making the Layout 5
Preparing the Negatives for Stripping 5
Attaching the Negatives to the Flat 5
Cutting Goldenrod Openings 5
Applying Tint Sections 5
Opaquing and Bordering 6

X. INSPECTION AND PROOFREADING (6 Hours)
Brownprint Proofs 6
Checking Lay and Proofreading 6
Corrections on Flats 6
Transmitting the Flat to the Platemaker 6

XI. CARE OF FLATS AFTER STRIPPING (2 Hours)
Inspection of Flats for Re-use 6
Storage of Flats 6

XII. QUINMESTER POST TEST

APPENDIX: QUINMESTER POST TEST SAMPLE 9

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GOALS

The lithographic student must be able to demonstrate:

1. A knowledge of how the lithographic stripper's job fits into the production of a printing job.
2. A knowledge of the place and value of stripping in lithographic reproduction.
3. Positive attitudes regarding the value and dignity of work.
4. Pride and respect of craftmanship for this occupational field.
5. Safe work habits and proper behavior.
6. An incentive to continue training within the printing industry.

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SPECIFIC BLOCK OBJECTIVES

BLOCK I - ORIENTATION

The student must be able to:

1. Identify course goals and objectives so that given this information he can express same to satisfaction of instructor.
2. Identify and demonstrate responsibilities during course so that given the responsibilities in carrying out school policies and work regulations he can express and demonstrate same to satisfaction of instructor.
3. Identify benefits so that, given benefits in terms of opportunities and qualifications for employment and background necessary for continued training he can express same to satisfaction of instructor.

BLOCK II - SAFETY IN STRIPPING DEPARTMENT

The student must be able to:

1. Demonstrate an understanding of safety rules in the stripping department by strict adherence to all rules and regulations.

BLOCK III - SURVEY

The student must be able to:

1. Write a paragraph explaining how stripping fits into the overall picture of the lithographic process.
2. Write a description of stripping and tell what are the advantages and disadvantages as opposed to lock up forms in letter press.

BLOCK IV - BASIC MATHEMATICS

The student must be able to:

1. Pass a test in mathematics which is related to lithographic stripping, incorporating the following: multiplication, addition, division, area measurements of a rectangle, triangle, circle and calculating numbers of forms on a press sheet.
2. Pass a test showing that they are completely familiar with the following measurement systems: U.S., metric and printer's units.

BLOCK V - BASIC DRAFTING AND LAYOUT PRACTICE

The student must be able to:

1. Mark the locations on the layout of an 8-1/2" x 11" letterhead, #10 envelope, 8-1/2" 14" sheet and 5-1/2" x 8-1/2" two up desk pad.

BLOCK VI - STRIPPING DEPARTMENT

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The student must be able to:

1. Write a list of the equipment, tools, materials and supplies used in the stripping department and explain each function.

BLOCK VII - JOB PLANNING

The student must be able to:

1. Prepare in writing a check list of all materials, films, layouts and all other pertinent information needed for a stripping job.

BLOCK VIII - LAYOUTS AND IMPOSITION

The student must be able to:

1. Draw on a goldenrod masking sheet the following layouts: simple one up, step and repeat, combination, work and tumble, work and turn and a signature imposition.

BLOCK IX - STRIPPING PROCEDURE

The student must be able to:

1. Strip up jobs that require the following: simple one up, step and repeat, combination, work and turn, work and tumble and signature layouts.

BLOCK X - INSPECTION AND PROOFREADING

The student must be able to:

1. Produce a proof using the photographic method, check proof and make all necessary corrections on flats.

BLOCK XI - CARE OF FLATS AFTER STRIPPING

The student must be able to:

1. Devise and maintain s system for the storage and possible use of stripping flats.

BLOCK XII - QUINMESTER POSTTEST

The student must be able to:

1. Satisfactorily complete the quinmester post-test.

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Course Outline

PRINTING 2 - 9755
(Lithographic Stripping)

Department 48 - Quin 9755.03

I. ORIENTATION

A. Objectives
   1. Purpose of course
   2. Skill development

B. Methods of Evaluation
   1. Paper and pencil
   2. Oral
   3. Manipulative
   4. Job performance

C. Student Responsibilities
   1. School policies
   2. Work regulations
      a. Appropriate dress
      b. Care of hand tools
      c. Use and care of equipment
      d. Materials and supplies
      e. Reporting lost equipment
      f. Reporting inoperative equipment
      g. Housekeeping

D. Student Benefits
   1. Opportunities for employment
      a. Scope of the trade
      b. Prospect for advancement
   2. Qualifications for employment
      a. Job competency
      b. Pride of workmanship
      c. Attitude
      d. Educational training
      e. Experience
   3. Background for continued training
      a. Go on to following quin in graphics
      b. Junior college
      c. Four year college

II. SAFETY IN STRIPPING DEPARTMENT

A. General Precautions
   1. Personal
   2. Shop

B. Safety in Equipment
   1. Eliminating causes for injury
   2. Eliminating electrical hazards

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C. Safety in Tools

D. Material and Supplies

III. SURVEY

A. Need for Stripping
   1. Imposition
   2. Proofing

B. Stripping for Lithography
   1. Goldenrod flats
   2. Shut plastic flats
   3. Sectional flats
   4. Complementary flats
   5. Paper negative flats

C. Stripping and Photo-Composing
   1. Favoring stripping
   2. Favoring the photo-composing machine

IV. BASIC MATHEMATICS

A. Numbers and Fractions
   1. Addition
   2. Subtraction
   3. Multiplication
   4. Division

B. Proportion
   1. Enlargement
   2. Reduction

C. Area Measurements
   1. Calculating area of rectangle, triangle and circle
   2. Calculating number of forms on a press sheet

D. Angles
   1. Elementary triangular measurements
   2. Accurately drawing an angled line
   3. Measuring an angle
   4. Dividing angles into circles
   5. Determining circumference

E. Units of Measurements
   1. U.S. system
   2. Metric system
   3. Printer's unit

V. BASIC DRAFTING AND LAYOUT PRACTICE

A. Measurements
   1. Instruments

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V. BASIC DRAFTING AND LAYOUT PRACTICE (Contd.)

2. Materials

B. Marking Locations on the Layout

C. Ruling Lines
   1. Pencil
   2. Pen

D. Scribing Lines
   1. Film line cutters
   2. Carbide-tipped scribbers

E. Dividing Lines and Angles
   1. Divider
   2. Scale

F. Ruling Parallel Lines
   1. T-square and triangle
   2. Dividers or compass
   3. Rolling the sheet
   4. Marked strips

G. Ruling at Right Angles
   1. Use a percision layout table
   2. Use a good straight edge and a steel triangle
   3. Use a beam compass
   4. Use triangular measurements
   5. Use the 3-4-5 ratio

H. Ruling Intermediate Angles
   1. Tools
   2. Materials

I. Ruling Curved Lines
   1. Compass
   2. Templates
   3. Irregular Curves

J. Location of Film Sections
   1. Direct assembly
   2. Location points
   3. Sides of film
   4. Centerlines or trim marks
   5. Punched holes

K. Fitting Irregular Forms
   1. Diameter or individual form
   2. Total number of forms
   3. Alternate calculation for total number of forms
   4. Selection of layout

L. Proportioning from Copy
   1. Reduction

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2. Enlargement
3. Same size

VI. STRIPPING DEPARTMENT

A. Equipment for Stripping
1. Stripping tables
2. Layout and line-up tables
3. Worktables
4. Shelves, cabinets and racks

B. Tools and Stripping
1. Rules and scales
2. Straight edges
3. T-squares
4. Triangles
5. Protractors
6. Dividers
7. Ruling pens
8. Compass
9. Pencils and ballpoint pens
10. Needles and scribers
11. Magnifiers
12. Razor blades, knives and shears
13. Brushes

C. Materials for Stripping
1. Goldenrod paper
2. Plastic sheets
3. Photographic film
4. Brownprint
5. Tint sheets
6. Red masking paper

D. Supplies for Stripping
1. Tapes
2. Cements
3. Marking inks
4. Opaques
5. Register mark tabs
6. Cleaning solutions

VII. JOB PLANNING

A. Preparations for Stripping
1. Checking instructions
2. Check films
3. Check materials and supplies
4. Check equipment

B. Planning the Layout
1. Establish quality level for the job
2. Materials to be used for layout

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VII. JOB PLANNING (Contd.)

3. Establish layout arrangement
4. Platemaking and press guides

C. Organizing the Job
1. Check copy
2. Tools and materials

VIII. LAYOUTS AND IMPOSITIONS

A. Classes of Layouts
1. Simple one-up forms
2. Step and repeat jobs
3. Horizontal steps
4. Vertical steps
5. Combination layouts
6. Work and turn layouts
7. Work and tumble layouts
8. Signature layouts

B. Signature Imposition
1. General
2. Signature lays

IX. STRIPPING PROCEDURE

A. Making the Layout
1. Basic reference lines
2. Establish positioning line to be drawn
3. Negative centerline layouts
4. Layouts based on trim marks
5. Trim and fold marks
6. Pressplate positioning lines
7. Step and repeat layouts

B. Preparing the Negatives for Stripping
1. Check negatives for defects
2. Check negatives for size
3. Trim negatives to size

C. Attaching the Negatives to the Flat
1. Clear plastic tape
2. Red plastic tape

D. Cutting Goldenrod Openings
1. Razor blade
2. Stencil

E. Applying Tint Sections
1. Screens
2. Clear

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F. Opaquing and Bordering
   1. Water base
   2. Alcohol base

X. INSPECTION AND PROOFREADING

A. Brownprint Proofs

B. Checking Lay and Proofreading

C. Corrections on Flats

D. Transmitting the Flat to the Platemaker

XI. CARE OF FLATS AFTER STRIPPING

A. Inspection of Flats for Re-Use

B. Storage of Flats

XII. QUINMESTER POSTTEST

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A P P E N D I X

Quinmester Post-Test Sample

8/9/10

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QUINMESTER POSTTEST I

Name_____ Date _____ Score ____

Multiple Choice Test Items

Each statement needs a word, a figure, or a phrase to make it correct. Only one of the choices listed is correct. Place the number of the choice you make in the space provided at the right edge of the sheet.

---

1. All electrical equipment should be grounded because (1) they will move, (2) they will float away, (3) they can cause you to get an electrical shock, (4) they need to stay in one place, (5) I don't know. ( )

2. Sharp tools are necessary for good workmanship. They are also the cause of (1) mistakes, (2) accidents, (3) bad work habits, (4) I don't know. ( )

3. All injuries, no matter how slight, must be reported first to the (1) principal, (2) parents, (3) students, (4) teacher, (5) I don't know. ( )

4. Before the stripper begins his job the copy must go to the _____ department. (1) press, (2) camera, (3) platemaking, (4) bindery, (6) I don't know. ( )

5. The striped up flat must go to the _____ department. (1) press, (2) camera, (3) platemaking, (4) bindery, (5) I don't know. ( )

6. Stripping operations will largely control the (1) accuracy of location of the printing job, (2) quality of the printing job, (3) amount of sheets run on the printing job, (4) colors of the printing job, (5) I don't know. ( )

7. Addition of 4-5/8 + 7½ + 12-3/16 + 8-5/32 equals (1) 32½, (2) 31⅞, (3) 33-3/4, (4) 32-15/32, (5) I don't know. ( )

8. 5/8 x 3/4 equals (1) 16/32, (2) 15/32, (3) 9/16, (4) 3/4, (5) I don't know. ( )

9. 4½ x 5 1/8 equals (1) 23-1/16, (2) 22-1/8, (3) 24½, (4) 23-5/16, (5) I don't know. ( )

10. 12 ÷ ½ equals (1) 46½, (2) 49-3/16, (3) 47, (4) 48, (5) I don't know. ( )

11. 12.250 x 4.125 equals (1) 39.521300, (2) 50.312550, (3) 50.531250, (4) 48.752555, (5) I don't know. ( )

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12. 24.625 ÷ 5 equals (1) 5.825, (2) 4.925, (3) 8.525, (4) 3.925, (5) I don't know. ( )

13. 2.125 + 6.438 + 13. + 5.937 + .250 equals (1) 27.750, (2) 28. 750, (3) 30.750, (4) 28.075, (5) I don't know. ( )

14. The press sheet is 35" x 45". The form we must print is 5" x 7". How many forms can we print on one sheet? (1) 35, (2) 40, (3) 42, (4) 45, (5) I don't know. ( )

15. The United States system of measurement consists of (1) fractions, (2) picas, (3) centimeters, (4) ems, (5) I don't know. ( )

16. The metric system of measurement consists of (I) fractions, (2) picas, (3) ems, (4) millimeters, (5) I don't know. ( )

17. The printer's unit of measurement consists of (1) fractions, (2) picas, (3) centimeters, (4) millimeters, (5) I don't know. ( )

18. Virtually all stripping is done at a (1) light table, (2) flat top table, (4) sink, (5) I don't know. ( )

19. Name five tools of the stripper?

a. _____

b. _____

c. _____

d. _____

e. _____

20. A material used for mounting the negatives is (1) twenty pound bond paper, (2) tissue paper, (3) 80 pound white enamel, (4) 80 pound goldenrod enamel, (5) I don't know. ( )

21. The masking paper should be _____ the press plate. (1) the same size as, (2) larger than, (3) smaller than, (4) I don't know.

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QUINMESTER POSTTEST II

Name _____ Date _____ Score ____

True-False Test Items

Each of the following statements is either true or false. If the statement is true, draw a circle around the letter T following it; if the statement is false, draw a circle around the F. If a statement is false in part, it is entirely false.

---

1. The first step in stripping a job is to line up the masking paper on a light table. T F

2. Draw the masking sheet against the edge of the table and tape it down. T F

3. The first line drawn is the centerline. T F

4. The plate bend is the next line drawn on the stripping flat. T F

5. The press clamps are used to secure the blanket to the press. T F

6. Some images on the plate that fall in the area between the edge of the cylinder at the gap and the edge of the plate could be printed. T F

7. The plate bend line and the lead edge of any size sheet of paper to be printed is the same line. T F

8. Paper is guided through a press by gripper fingers. T F

9. The paper gripper line is drawn at the back end of the masking sheet. T F

10. Stripping is done right side up. T F

11. Tape must be kept at least 1" away from the image. T F

12. Halftones and close fitting type are best stripped on different flats. T F

13. After the negatives are positioned, we then unmask areas that are to be printed. T F

14. Halftones are unmasked in anyway we feel like. T F

15. We opaque on the masking paper. T F

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QUINMESTER POSTTEST III

Name _____ Date _____ Score ____

Performance Test Items

Given all materials and information, the student must perform the following to be marked by the instructor.

---

1. Strip up an 8½" x 11" letterhead.
2. Strip up a #10 envelope.
3. Strip up a 5½" x 8½" four page booklet.
4. Strip up a legal size letter.

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ANSWER KEY TO QUINMESTER POSTTEST I

Multiple Choice

1. They can cause you to get an electrical shock (3)
2. Accidents (2)
3. Teacher (4)
4. Camera (2)
5. Platemaking (3)
6. Accuracy of location of the printing job (1)
7. 32-15/32 (4)
8. 15/32 (2)
9. 23-1/16 (1)
10. 48 (4)
11. 50.531250 (3)
12. 4.925 (2)
13. 27.750 (1)
14. 45 (4)
15. Fractions (1)
16. Millimeters (4)
17. Picas (2)
18. Light table (1)
19. a. T-square
    b. Triangles
    c. Razor blades
    d. Scissors
    e. Brushes for opaquing
    f. Magnifying glass
20. 80 pound goldenrod enamel (4)
21. The same size as (1)

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ANSWER KEY TO QUINMESTER POSTTEST II

True-False

1. True
2. False
3. True
4. True
5. False
6. False
7. True
8. True
9. False
10. False
11. False
12. True
13. True
14. False
15. False